

Robert M. Owczarek

**Peer – reviewed publications:**

1. R.Owczarek, *Spinor Structures on Flag manifolds of Compact Simple Lie Groups*, submitted to Journal of Physics A
2. R.Owczarek, *Quantization of Ideal Fluids: Perturbative or Non – perturbative Approach*, Acta Phys. Pol., **B 27**, (1996), 2387-2391
3. H. Makaruk, R. Owczarek,  *$Gl(n, \mathbb{R})$  - invariant tetrad theory and its relation to purely affine formulation of general relativity*, Rep.Math.Phys., **36**, (1995), 355-363,
4. R.Owczarek, *On geometric methods in description of quantum fluids*, in "Quantization, Coherent States and Complex Structures", Plenum, New York, (1995) ed. J.-P. Antoine, 265-269
5. R.Owczarek, *Notes on Superconductivity by Quantum Size Effect and Non – Equivalent Spin Structures*, J. Tech. Phys., **36**, (1995), 181-185
6. R.Owczarek, *Non-zero Helicity Generalization of the Nielsen-Olesen String Solution*, Rep. Math. Phys., **34**, (1994), 305-310
7. R.Owczarek, *Knotted Vortex Lines, Helicity and Superfluid Phase Transition*, Proceedings of the 1-st International Workshop on Quantum Vorticity and Turbulence in He II Flows, ed. G. Stamm, W. Fiszdon, Max – Planck – Institut für Strömungsforschung, Göttingen, (1994), 32-38
8. R.Owczarek, *Knotted Vortices and Superfluid Phase Transition*, Modern Physics Letters, **B7**, (1993), 1523 - 1526
9. R.Owczarek, *Knotted Vortices and Fermionic Excitations in Bulk Superfluid Helium*, Modern Physics Letters, **B7**, (1993), 1383 - 1386
10. R.Owczarek, *Frames and Fermionic Excitations of Vortices in Superfluid Helium*, Journal of Physics, Condensed Matter, **5**, (1993), 8793 - 8798

11. R.Owczarek and T. Slupski, *Quantum Vortex Waves in Superfluid Helium. A Hamiltonian Approach*, Physica, **B 182**, (1992), 278 - 286
12. R.Owczarek, *Topological Defects in Superfluid Helium*, International Journal of Theoretical Physics, **30**, (1991), 1605 - 1612

**Non – Peer – reviewed publications:**

13. R.Owczarek, *Non-zero Helicity String Model*, Proceedings of The 26-th Symposium on Mathematical Physics, December 7-10, 1993, Toruń, Poland, ed. R. Mrugała
14. R.Owczarek, *Topologically Non – trivial Vortex Lines in Superfluid Helium*, materials of the IV Symposium of the Polish Society of Applied Electromagnetics, 30-th May — 1-st June 1994, Łańcut (in Polish, 1 page, no number)
15. R.Owczarek, *Topology of Vortex Filaments in Superconductors and Superfluids*, materials of the III Symposium of the Polish Society of Applied Electromagnetics, 6-8 September 1993, Zaborów (in Polish, 2 pages, no number)